

REMARKS

Claims 1-36 are pending in this application. By this Amendment, claims 1, 3, 11, 12, 14, 16, 18, 22, 26, 31, 34 and 35 are amended. Support for these amendments can be found at least at [0063], [0091], [0192] and [0025]. Thus, no new matter is added.

Entry of the amendments is proper under 37 CFR §1.116 since the amendments: (a) place the application in condition for allowance (for the reasons discussed herein); (b) do not raise any new issue requiring further search and/or consideration (since the amendments amplify issues previously discussed throughout prosecution); (c) satisfy a requirement of form asserted in the previous Office Action; (d) do not present any additional claims without canceling a corresponding number of finally rejected claims; and (e) place the application in better form for appeal, should an appeal be necessary. The amendments are necessary and were not earlier presented because [e.g. they are made in response to arguments raised in the final rejection]. Entry of the amendments is thus respectfully requested.

Applicant appreciates the courtesies shown to Applicant's representatives by Examiners Leflore and Shalwala in the February 2, 2005 personal interview. Applicant's separate record of the substance of the interview is incorporated into the following remarks.

I. The Claim Define Patentable Subject Matter

A. Claims 1-15, 17-20, and 31-33

The Office Action rejects claims 1-15, 17-20 and 31-33 under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent No. 6,057,809 to Singhal et al. This rejection is respectfully traversed.

Singhal does not disclose a drive circuit of an electrooptic device that includes a drive device that determines, "on the basis of a multi-bit display data, the subfields for which to apply the ON voltage, the applied ON voltage being concentrated in the first half of the field," as recited in claim 1 and as similarly recited in claims 3, 11, 12 and 14. Further, Singhal does

not disclose a drive method of an electrooptic device that includes "performing control so that the pulse signals for bringing the respective pixels into the transmissive states are concentrated in the first half of a pertinent field for displaying a gradation per pixel" as recited in claim 18. Similarly, Singhal does not disclose a drive method of an electrooptic device that includes" bringing at least one of the subfields in which a pixel is to be brought into the transmissive state, the pixels in the transmissive state being successively arranged in the first half of the pertinent field on the basis of a multi-bit display data," as recited in claim 31.

Singhal merely discloses a controller that generates 16 gray shades by a four-frame FRC cycle using modulated row periods. See, e.g., Singhal, col. 6, lines 29-30 and Fig. 6. Nowhere does Singhal disclose a drive method or apparatus where the applied ON voltage is concentrated in the first half of the field. Even if the ON voltage is applied in the first half of the field, in Singhal, this is merely a random occurrence, as acknowledged during the personal interview. Because electrooptic device and method in Singhal does not disclose applying the ON voltage in the first half of the field, the claimed drive circuit and method is different from the device of Singhal.

Thus, independent claims 1, 3, 11, 12, 14, 18, 31, and the claims dependent therefrom, are patentable over Singhal. Withdrawal and reconsideration of the rejection are respectfully requested.

B. Claim 6

The Office Action rejects claim 6 under 35 U.S.C. §103(a) for allegedly being unpatentable over Singhal. This rejection is respectfully traversed.

As discussed above, nowhere does Singhal teach the drive circuit of an electrooptic device drive method to have these features of the claimed invention with respect to claim 1. Nor does Singhal suggest modifying the disclosed controller to incorporate such features. Claim 6 is dependent from claim 1. Thus, for at least the reasons discussed above with

respect to claim 1, as well as for the additional features it recites, claim 6 would not have been rendered obvious by Singhal. Accordingly, reconsideration and withdrawal of the rejection is respectfully requested.

C. Claim 16, 22-24, 26-28, 30 and 34-36

The Office Action rejects claims 16, 22-24, 26-28, 30 and 34-36 under 35 U.S.C. §103(a) as allegedly being unpatentable over Singhal in view of U.S. Patent No. 5,712,652 to Sato et al. This rejection is respectfully traversed.

Singhal does not disclose an electrooptic device that "determines, on the basis of a multi-bit display data, the subfields for which to apply the ON voltage, the applied ON voltage being concentrated in the first half of the field," as recited in claim 16. Similarly, Singhal does not disclose an electrooptic device that includes a control device that "controls the data line drive circuit on the basis of the multi-bit gradation data so that pulse signals for bringing the respective pixels to the transmissive state are concentrated in the first half of each field for displaying a gradation per pixel," as recited in claim 26 and as similarly recited in claim 35. Further, Singhal does not disclose a drive circuit that includes a control device "that performs controlling the basis of the multi-bit display data so that at least one of the subfields in which a pertinent pixel is to be brought into the transmissive state, the pertinent pixel in the transmissive state being successively arranged in the first half of the pertinent field," as recited in claim 34.

Singhal, as discussed above, merely discloses the generating of gray shades and thus, does not disclose controlling the data line drive circuit, so that pulse signals for bringing the respective pixels to the transmissive state are concentrated in the first half of the field.

Applicant submits that Sato fails to remedy the deficiencies of Singhal with respect to independent claims 16, 22, 34 and 35, and the claims dependent therefrom. Sato is merely

cited in the Office Action for allegedly disclosing pixels that include pixel electrodes, switching elements, an electrooptic material, and the arrangement of a counter electrode.

Thus, independent claims 1, 16, 22, 26, 34 and 35 and the claims dependent therefrom, would not have been rendered obvious by Singhal in view of Sato. Withdrawal and reconsideration of the rejection are respectfully requested.

D. Claim 21

The Office Action rejects claim 21 under 35 U.S.C. §103(a) as allegedly being unpatentable over Singhal in view of U.S. Patent No. 6,037,920 to Mizutome et al. This rejection is respectfully traversed.

Applicant respectfully submits that Mizutome fails to remedy the deficiencies of Singhal with respect to claim 18. Claim 21 depends from claim 18. Mizutome merely cited in the Office Action for allegedly disclosing the pulse width in accordance with the temperature of the liquid crystal device. See e.g., Mizutome, Abstract and Office Action, page 13.

Thus, for at least the reasons discussed above with respect to claim 18, as well as for the additional features it recites, claim 21 would not have been rendered obvious by Singhal in view of Mizutome. Withdrawal and reconsideration of the rejection are respectfully requested.

E. Claims 25 and 29

The Office Action rejects claims 25 and 29 under 35 U.S.C. §103(a) as allegedly being unpatentable over Singhal in view of Sato and further in view of Mizutome. This rejection is respectfully traversed.

Applicant respectfully submits Mizutome and Sato fail to remedy the deficiencies of Singhal with respect to claims 22 and 29. Claim 25 depends from claim 22 and claim 29 depends from 26. Thus, for at least the reasons discussed above, as well as for the additional

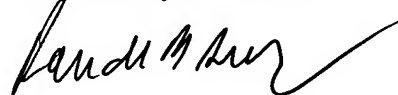
features they recite, claims 25 and 29 would not have been rendered obvious by Singhal in view of Sato and further in view of Mizutome. Withdrawal and reconsideration of this rejection are respectfully requested.

II. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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